

of the time announced for their reception. Of these 102 memoirs, only 32 were judged worthy of serious examination. But no one has gained the famous prize of 25,000 francs, which the refore reverts to the testator's family. As to the prize of 5,000 francs, it will probably be divided among various competitors who have presented interesting memoirs.

At the Annual Meeting of the Institution of Civil Engineers, held on December 23, it was stated that on the 30th November last, the number of members and associates was 1,994. On the subject of finance, it was stated that during the last fourteen years the savings had amounted to something like 2,000*l.* per annum, on the average. The receipts are now nearly 9,000*l.* per annum, while the ordinary expenditure was only 6,000*l.* per annum. What with trust funds, investments, and cash balance, the Institution has 30,233*l.* 8*s.* 6*d.* at its disposal. The library numbers 10,443 volumes.

WE would draw the attention of our London readers to the advertisement in this week's NATURE with regard to the Junior Philosophical Society, meeting at 6A, Victoria Street, S.W. We believe we have had occasion to speak of it before, as one whose object and method of work are commendable.

THE January number of Petermann's *Geographisches Mittheilungen*, contains a contribution by Dr. Nachtigal giving valuable details concerning the various Pagan tributaries to the kingdom of Baghirmi. Dr. Meyer gives some statistics of the inhabitants of the Philippine Islands, whose number he estimates at 7,451,352. In the same number is a communication from Dr. Miklucho-Maclay, dated Batavia, October 25, 1873, in which he maintains that the Papuas and Negritos belong to the same race, notwithstanding that the former are dolichocephalic, and the latter brachycephalic.

THE principal article in Guido Cora's excellent Italian Geographical Journal *Cosmos*, is on "Recent Expeditions to New Guinea."

THE "Second Report of the Committee on Boulders appointed by the Royal Society of Edinburgh," contains much interesting information which will no doubt be ultimately of service to geologists.

WE have received the first number of *The Argonaut* (Hodder and Stoughton), a journal started by "a number of young fellows who are just entering on the bolder thoughts or the more active duties of manhood," for the purpose of discussing questions in which all earnest young men take an interest. It professes to be devoted to no party either in religion, politics, or philosophy. It is edited by Mr. George Gladstone, F.C.S., and this first number contains an Introduction by Dr. Gladstone, F.R.S. The contents are varied and mostly interesting.

THE Opening Address to the Geological Association, by the president, Mr. Henry Woodward, F.R.S., has been printed as a supplemental number of the Proceedings. The Address is a survey of what has been done in geology during the past twelve months.

"THE Glaciation of the Northern Part of the Lake District," is the title of a paper by Mr. J. Clifton Ward, reprinted from the *Quarterly Journal of the Geological Society*.

THE *Mémorial Diplomatique* states that the Italian Consul at the Piræus has informed his Government that M. Théodore Tubini, banker, at Athens, has obtained a concession for cutting a canal through the Isthmus of Corinth. The principal clauses of the concession are that the canal shall have a *minimum* depth of 8½ metres (27 ft.), and a width of 12 metres (39 ft.) at the bottom. Half-way through the canal is to be a dock of 30,000 square metres in extent, and of sufficient depth to receive the largest vessels. The canal is to be completed in six years. The

concession is for 99 years, and a deposit of 12,000*l.* is to be paid immediately after the Greek Parliament has approved the concession. The estimated cost of the undertaking is 800,000*l.*

THE principal papers in No. 39 of the *Journal of the Scottish Meteorological Society*, are "The Report of the Committee appointed to investigate the Relation of the Herring Fishery to Meteorology," an abstract of which has been given in our report of the Society's meeting, and a valuable paper by the Rev. W. Clement Ley, "On the Mean Inclination of Winds towards the Lower Isobars." The Journal contains, as usual, the admirably compiled quarterly Meteorological returns from the Society's numerous stations.

WE have received a reprint from the "Proceedings of the Geologists' Association" of Mr. Henry Hick's paper on the "Classification of the Cambrian and Silurian Rocks."

PART III. of vol. xxii. of the "Transactions of the North of England Institute of Mining and Mechanical Engineers" consists entirely of an elaborate and valuable paper on the geology of the Redesdale ironstone district, by Mr. G. A. Lebour, of the Geological Survey. It is accompanied by two useful maps of the district.

AN aerolite, *Iron* says, weighing about twelve pounds fell in the vicinity of Marysville, Cal., on the 24th of August, which was so hot that it could not be handled for some time. It came crashing through the tree tops with a bright flash, and was found buried eight feet in the ground.

THE additions to the Zoological Society's Gardens during the past week include an Asiatic Wild Ass (*Equus onager*) from S.W. Asia, presented by Capt. H. L. Nutt; an Anubis Baboon (*Cynocephalus anubis*) and a Patas Monkey (*Cercopithecus ruber*) from W. Africa, presented by Mr. A. E. Oakes; a Bonnet Monkey (*Macacus radiatus*) from India, presented by Mr. F. E. Bradley; a Hybrid Duck (between ♂ *Aix sponsa* and ♀ *A. galariculata*), presented by Mr. J. C. Parr; a Yarell's Curassow (*Crax yarelli*) from S.E. Brazil, and a Coypu (*Myopotamus coypus*) from S. America, purchased.

SCIENCE IN KÖNIGSBERG

WE have before us the *Schriften der Königlichen Physikalisch-Ökonomischen Gesellschaft zu Königsberg*, for 1871-72, in which is to be found a considerable amount of useful scientific observations, both of local and general interest. Dr. Berendt, who, along with some coadjutors, has been engaged in preparing a full geological map of Prussia, and in other geognostic researches, describes a specimen of immature amber brought from the seabottom on the Samland coast. Under a wrinkled and brittle crust, the resinous substance was soft, transparent, and highly elastic. From some similarity of physical properties (not complete, however), Dr. Berendt inclines to identify it with a fossil resin found by Bergemann in brown coal of Lattorf, and described under the name of kranzit. The sp. gr. of the new substance is 0.934; it is insoluble in alkalies, spirit of wine, oil of turpentine, soluble in sulphuric acid; it begins to melt at 300°; in air it burns with a luminous sooty flame, giving a peculiar smell; it is free of sulphur, but contains a little nitrogen, like amber and some kinds of asphalt.

The same author has given much attention to the formation of amber in Prussia, and in an earlier number of the *Schriften* (1869, first part) will be found a very full investigation, by him, of the subject. In one of the present numbers he gives an account of preparations lately made for subterranean mining of the substance in Samland. Hitherto this method has not been adopted, and on two accounts chiefly; the nature of the superincumbent strata (which are generally sand and clay), and the high value of amber, which sufficiently repaid the other method. The Government, however, has lent some aid, and in July 1872 boring was commenced at the southern base of Carlsberg, where, at a depth of about forty-four metres, blue earth was found containing amber in abundance. This is about 5.7 m.,

or eighteen feet below the sea. The results were of a highly promising nature, and exceeded expectation.

The coast of Samland affords a good opportunity of studying the Algeæ of the Baltic; and this forms the subject of a communication from M. Caspary. It is known that the water of the Baltic contains a much smaller proportion of salts than that of the North Sea or Atlantic. According to a recent analysis by Von Behr, the quantity was only 0.6766 per cent. To this fact, chiefly, and also to the fact of a colder climate, M. Caspary attributes the much smaller number of species of Algeæ in the Baltic than on the English coast. He enumerates only twenty-five from the Prussian coast, whereas, at Falmouth, in Cornwall, 176 different species have been found. The water of the Atlantic contains about four per cent. of salt, or nearly seven times more than the Baltic water.

We further note, in the department of Botany, a paper in which Dr. von Klinggraff describes the species and varieties of Sphagnum found in Prussia. In referring to the colouring of the leaves as a means of characterisation, he points out that the red and yellow colours almost always exclude each other. Red is found in only three species; *S. acutifolium*, *tenellum* and *cymbifolium*; and each of these has a purple-red variety. On the other hand, yellow is wanting in the first two, and the variety *congestum* of the third is the only known example in which the red and yellow co-exist in forms of the same species.

Among the various organic remains found in amber, those of molluscs are peculiarly rare. It might have been expected that the liquid resinous matter would more readily surprise such animals than running or flying insects (which are abundant), while the shell, after death of its tenant, would offer a longer resistance to destruction than an unprotected body. It would be rash to conclude that the amber forest contained as few molluscs as our present exclusively pine forests; and botanists have shown that other trees than those of the pine species must have been present. In these mixed forests there were doubtless numerous molluscs, and we are led to suppose that the resin-producing trees were carefully avoided by them. Such is the view given by M. Künow, who describes two snail shells found in amber, and probably belonging, he thinks, to the genus *Helix*. Only three previous notices of similar discoveries has he met with; and among the 13,000 organic remains of amber in the Society's collection, there is no piece of the kind in question.

Dr. Buchholz furnishes an account of the Hansa Arctic Expedition, and many interesting particulars as to the forms of life observed in the North Polar regions.

The anatomical collection in the University at Königsberg contains three bear skulls found in the province. These are described at some length by M. Müller. They differ much in size and form, and it is striking that such different individuals of the same species should have lived so near one another (the places of discovery not having been more than 20 miles apart). A few similar bear skulls have been found in this country and in Ireland, and are described by Owen under the name of fen-bears.

It has been commonly believed that living trees struck by lightning are frequently consumed. In a paper on the effects of lightning on trees and telegraph posts, M. Caspary shows this is a mistake, and that the case is extremely rare. He cites 93 authenticated cases of trees having been struck; the species were as follows (and here also some common notions are disproved):—1 *Populus alba*, 2 *Pirus communis*, 2 *Ulmus*, 3 *Pinus picea* L., 3 *Betula verrucosa*, 3 *Fraxinus excelsior*, 12 *Pinus sylvestris*, 12 *Picea vulgaris* Link., 14 *Populus monilifera*, 15 *Quercus pedunculata*, 20 *Populus italica*. Several valuable experiments and results are detailed in this paper, of which, however, accounts may be found in English serials.

Another important paper in physics treats of the arrangements at a station for measuring ground temperatures in Königsberg, and the correction of the thermometers there employed. It is by Dr. Ernst Dohrn.

Archæology claims a considerable share of the Society's attention; and there is one paper by Dr. Berendt, which specially deserves our notice. It enters very fully into the question of certain curious "face urns" which have been found in the region about Dantzig, &c. The forms of these articles are calculated to throw a good deal of light on the physiognomical features and the manners of the people that used them.

Königsberg now numbers over 100,000 inhabitants, and the sewage question becomes urgent. Dr. Müller calls the attention of the Society to what is being done in other cities and countries, by way of improvement in this direction.

WELLINGTON N.Z. PHILOSOPHICAL SOCIETY

THE President, Dr. Hector, delivered his annual address before a meeting of members on Aug. 6, 1873. Dr. Hector in his opening remarks paid a tribute to the memory of Dr. Fred. John Knox, who had during a life-time contributed greatly to the science of comparative anatomy. Dr. Knox was an undoubted authority on all matters relating to the Cetacea, having made it his chief study. As one of the oldest members of the New Zealand Society he contributed largely and valuably to its transactions and the museum, which latter is specially indebted to him for the numerous contributions of anatomical preparations. The society, during its six years' existence, has gone on steadily increasing its members, who now number 142. Referring to vol. v. of the Transactions, Dr. Hector stated it contained forty-eight original papers, some of which possess a value from their originality of research which cannot fail to make the Transactions in future times important for reference.

Mr. T. Locke Travers' paper on the Life and Times of Te Raupara is a valuable page in the history of New Zealand, as the career of a man like Te Raupara is not merely of interest from its association with the early history of the colonisation of these islands, but affords a subject for study in connection with the more general historical question of the rapidity with which changes can be effected in uncivilised races, and the aptitude which they show in acquiring the arts, both peaceful and warlike, from colonists or conquerors as the case may be. Mr. Travers' contribution, valuable though it is, is but a small portion of the material relating to the Maori race which would find a fitting place in the Transactions of the Institute. The Maoris present a peculiarity of a mental type, the reason for which is not yet fully explained; as a race they show evidence of greater mental vigour than might have been expected in a people possessing no written knowledge. The facility with which they acquire our written language, and the delight which they take in exercising it, in reducing to writing their ancient *waiatas* (songs) and traditions is of itself a remarkable evidence of their vigour of mind. It does not appear, however, a reliable course in the collection of these songs to employ the Maori narrators to reduce them to writing, as it must be a process of translation of a most complex kind, and must lead to loss of accuracy both in matters of fact and in form of expression. A most interesting feature in the Maori language is the minute detail with which natural objects have been discriminated and named. He contrasted this with the North American Indians, who have only names for objects of immediate and practical utility in their affairs of every-day life. The Maoris, on the contrary, appear to have possessed a pure love of exercising their discriminating faculty; every tree or shrub, useful or useless, nearly every fish of large size or insignificant, and even many insects and lower forms of life that would remain unnoticed by most Europeans unless specially trained to the observation of such objects, have all their special names to the Maoris. The frequent reference made in their songs and traditions to these natural objects, invests them with a richness of imagery that adapts them for the poetical expression of sentiments and emotions that could only have been feebly if at all developed to the minds of the originators and narrators of those legends.

One of the most important events connected with this subject is the publication of the poem "Ranolf and Amohia," to the talented author of which all who love natural history must feel grateful for the abundant allusions which he has made to the characteristic features of the fauna and flora of the country, and the care which he has exercised in making his descriptions accurate. When a poet qualifies himself to appreciate the precise relations of the objects that enter into the scenes he depicts he will find that it is not necessary to sacrifice either facility or grace of expression in order to obtain the impressiveness which arises from strict accuracy. From this point of view Mr. Domett's poetical descriptions of the natural history of the new country cannot fail to aid in linking the sympathy of literature and fancy with the study of Science, and do good service to those objects which the society has most in view. The president also eulogised the efforts of a member of the Institute, Mr. G. H. Wilson, whose graceful and vigorous pen has been devoted to the rendering of those legends which relate to events that occurred in past time in the immediate neighbourhood of Wellington. The President referred to the papers of Messrs. Mantell and Taylor as bearing out his (Dr. Hector's) view of the recent date of the extinction